OFFICE OF THE GOVERNOR **BUDGET AND PROGRAM PLANNING**

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STATE OF MONTANA

BRIAN SCHWEITZER GOVERNOR

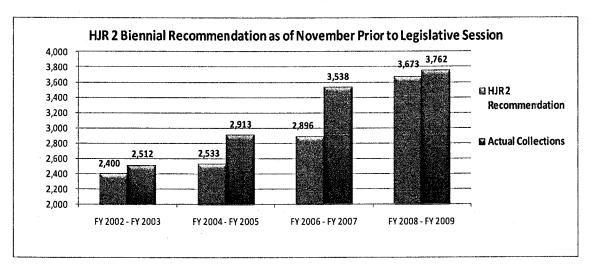


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Addendum 1 – Updates to FY 2011 and 2013 Biennium Revenue Estimates

Econometric Models

Over the past decade, revenue models used by OBPP and the LFD have consistently missed the mark during times of rapid accelerating (or decelerating) economic trends. This is due in large part to frequency of the measurement to which projections are anchored - namely prior fiscal year-end collections. As is shown in the following table, HJR 2 which sets out the official revenue estimate used by the Legislature and made in each respective November directly preceding a legislative session have missed actual revenue collections for the upcoming biennium by an average of 11%.



The most likely explanation for the revenue understatement is that there has been too much reliance on old data and an over-reliance on information that only indirectly, not directly, estimates state revenues, for example, proxies such as predictions of economic growth, oil prices, and the like.

While the economic outlook continues to brighten and while the econometric inputs are improving, their updates do not come timely enough. As an example, the Montana GSP estimate for the first quarter of CY 2010 and U.S. GDP estimate for the third quarter of CY 2010 were recently revised and moved up relative to the projections available in October. This means the base data for our complete revenue forecasts in November were understated.

There is, however, a key data point that is not lagging, and that is not a proxy for revenue collections and that is the actual amount of collections to date. Through November, 2010 total general fund revenue was \$459.245 million. This is \$50.541 million (12.37%) more than collections posted in SABHRS through November of

FY 2010. This means that collections through November 2010 are currently running \$5.554 million above the anticipated FY 2011 HJR 2 gain over FY 2010 collections (\$44.987 million) for all of FY 2011. While there may be accounting and collections anomalies, the pattern and level of such timing adjustments (late posting of motor vehicle revenue in FY 2010, late reversal of video gaming accruals in FY 2011, etc.) effectively cancel each other out. Please see the following chart which shows year-to-date general fund revenue through November, 2010.

| General Fund Revenue Monitoring Report Fiscal Year 2011 - Revenue Through November (\$ millions) | | | | | | | | |
|--|-------------------|----------------------|--------------|-------------|-----------------|----------------|------------------|-------------|
| Revenue Source | Actual FY 2010 | Projected FY 2011 | \$ Change | % Change | FY 2010 YTD | FY 2011 YTD | \$ Change | N Change |
| MAJOR TAXES | | | | | | | | |
| hdividual Income Tax | \$717.834 | \$738,751 | \$20.927 | 2.92% | \$247 759 | \$276.898 | \$29, 139 | 11.76% |
| Property Tax | \$222 513 | \$229.034 | \$6.574 | 2.95% | §11784 | \$9,662 | (\$2,122) | (18,01%) |
| Vehicle Taxes and Fees | \$103,853 | \$107,025 | \$3,167 | 3.05% | \$6.745 | \$36.414 | \$29,669 | 439.84% |
| Corporation Licence Tax | \$87 901 | \$103,320 | \$15.419 | 17.54% | \$25 513 | \$30,425 | \$4.912 | 19.25% |
| Insurance Premiums Tax | \$54 892 | \$54.537 | (\$0.305) | (0.56%) | \$12 283 | • | (\$0.026) | (0, 21%) |
| Video Gambling Tax | \$62,395 | \$55.340 | \$2.944 | 5,62% | \$30.371 | | (\$17.957) | |
| Total Major Taxes | \$1,239.392 | \$1,288.117 | \$48.725 | 3.93% | \$334.455 | \$378.069 | \$43.614 | 13.04% |
| NATURAL RESOURCE TAXES | | | | | | | | |
| Oil and Gas Production Taxes | \$95 491 | \$101.421 | \$5.930 | 6.21% | \$0,000 | SO.00C | \$0.000 | |
| U.S. Mineral Royalties | \$30 283 | \$29.674 | | (2 03%) | \$6 920 | \$7,520 | \$0.600 | 8.67% |
| Coal Severance Tax | \$10 322 | \$14.848 | \$4.526 | 43.85% | \$3 138 | \$3,540 | 50.403 | 12.83% |
| Metalliferous Mines Tax | \$6 541 | \$6.431 | | (0 92%) | \$0 000 | \$0.801 | \$0.001 | 890.00% |
| Electrical Energy Tax | \$4713 | \$4.452 | (\$0.261) | (5 55%) | \$0 956 | \$1.27£ | \$0.323 | 33.76% |
| Wholesale Energy Transactions Tax | \$3,553 | \$3.657 | \$0.101 | 2.84% | \$0 822 | \$1.028 | \$0.206 | 25.12% |
| lotal Natura: Resource Lakes | \$150.911 | \$160.533 | \$9.622 | 6.36% | \$11.835 | \$13.368 | \$1.533 | 12.95% |
| INTEREST EARNINGS | | | | | | | | |
| Coal Trust Interest Earnings | \$26 9 14 | \$26,512 | (\$0.402) | (149%) | \$6.757 | \$6.548 | (\$0.209) | (3, 10%) |
| Treasury Cash Account Interest | \$2 692 | \$1,636 | (\$1.026) | (38 12%) | \$1 165 | SO.988 | <u>(\$0.178)</u> | (15.25%) |
| Total Interest Earnings | \$29.605 | \$28.178 | (\$1,428) | (4.82%) | \$7.922 | \$7.505 | (\$0.387) | (4, 88%) |
| LIQUOR TAXES | | | | | | | | |
| Liquor Excise and License Taxes | \$15 626 | \$16,134 | \$0.478 | 3.06% | \$2.532 | \$5.56€ | \$3.034 | 119.83% |
| Liquor Profits | \$9 000 | \$9.511 | \$0.511 | 5.68% | \$0 000 | SO.000 | \$0.000 | |
| Beer Tax | \$3,032 | \$3,142 | \$0.110 | 3, 63% | \$1 145 | \$1,117 | (\$0.028) | (2.45%) |
| Wine Tax | \$1933 | \$2,098 | \$0.165 | 8.55% | \$0.674 | \$0.664 | (80.010) | (1.42%) |
| Total L quor Taxes | \$29.591 | \$30.855 | \$1.264 | 4.27% | \$4,351 | \$7.347 | \$2,996 | 68.86% |
| TOBACCO TAXES | | | | | | | | |
| Cigarette Tax | \$32 213 | \$31,029 | (\$1.189) | (3 69%) | £13 580 | \$12.624 | (\$0.957) | (7.04%) |
| Tobacco Products Tax | \$5 334 | \$5,630 | \$0.346 | 6.48% | \$1914 | \$1.950 | 30.036 | 1.87% |
| Tobacco Settlement | \$3 463 | \$3,535 | \$0.096 | 2.78% | \$0,000 | 80.00C | \$0.000 | |
| Total Tobacco Taxes | \$41.021 | \$40.274 | (\$0.747) | (1.82%) | \$15,494 | \$14.573 | (\$0.921) | (5.94%) |
| SALESTAXES | | | | | | | | |
| Telecommunications Excise Tax | \$23.523 | \$21,772 | (\$1,751) | (7 45%) | \$3 021 | \$5,501 | 52.480 | £2.10% |
| Institutional Reimbursements | \$22,003 | \$17.555 | | (20 21%) | \$4 653 | SO.000 | (\$4.653) | (100,00%) |
| Accommodations Tax | \$12 331 | \$12.852 | \$0.521 | 4.23% | \$5 122 | \$5.849 | \$0.727 | 14. 9% |
| Health Care Facility Utilization Fees | \$5300 | \$5.039 | | (4 93%) | \$1.324 | \$1,296 | (\$0.027) | (2.08%) |
| Rental Car Sales Tax | \$2,807 | \$2,939 | \$0.192 | 6.82% | \$1 193 | \$1,300 | 50.107 | 8.95% |
| Total Sales Taxes | \$65.962 | \$60.217 | | (8.71%) | \$15.312 | | (\$1.366) | (8.92%) |
| OTHER TAXES AND REVENUES | | | | | | | | |
| Lottery Profits | \$10,631 | \$12.327 | \$1.696 | 16.95% | \$0,000 | \$0.000 | \$0.000 | |
| Highway Patrol Fines | \$4 645 | \$4.636 | \$0.020 | 0.42% | \$1.421 | \$1,155 | (\$0.266) | (18.74%) |
| Investment Licenses and Permits | \$6 225 | \$6,008 | | (3 48%) | \$0 906 | \$1,022 | \$0.116 | 12.80% |
| Contractors' Gross Receipts Tax | \$6 963 | \$6.477 | | (7 07%) | \$3 740 | \$4,325 | \$0.585 | 15.63% |
| Driver's License Fee | \$4 153 | \$3.531 | | (14 32%) | \$1 461 | \$1.777 | \$0.316 | 21.62% |
| Rail Car Tax | \$2,579 | \$2.031 | | (21 20%) | \$1 429 | 31.047 | ₿0.217 | 15,20% |
| Other Revenue | \$35.454 | \$28.838 | | (18 52%) | \$10 375 | | \$4.104 | 39,56% |
| Total Other Revenue Sources | \$70.661 | \$63.958 | | (9.45%) | \$19.333 | \$24.405 | \$5.072 | 26.23% |
| Total General Fund | \$1,627.145 | \$1,672.132 | \$44.987 | 2.75% | \$408.704 | \$459.245 | \$50.541 | 12.37% |

Updates to Estimates

With five months of FY 2011 general fund revenue actually known, the forecast results using the current models strongly indicate that they are not high enough, and unless there is a substantial economic softening, the use of the current models will, once again, significantly understate revenues, and continue a decade-long pattern of missing actual collections, but never by overstating them. It is analogous to having a compass that always points to magnetic north and has never been recalibrated to point to true north. OBPP is now shifting to a more realistic and defendable estimating methodology that will reduce the likelihood of underestimating revenue.

OBPP's current FY 2011 total general fund revenue estimate is \$1,694 million. Today OPBB is updating its FY 2011 estimate to \$1,732 million, and has applied this base number to its revenue growth rates for 2012 and 2013 to arrive at a new total of \$118.7 million increase over the next three years.

Methodology Change

The following table details the past eleven years history of the percentage of cumulative revenue received through November of each respective year. A higher number reflects a year in which revenue was proportionately collected earlier in the year whereas a lower number reflects a year in which revenue was collected proportionately later. Extrapolating general fund revenue is done by dividing the revenue received year-date by the 11-year average (26.51%) of cumulative revenue received through November (i.e. \$459.245 million/26.51%).

| Cumulative Revenue | Received through November |
|--------------------|---------------------------|
| Fiscal Year | % Received |
| FY 2000 | 25.06% |
| FY 2001 | 24.74% |
| FY 2002 | 28.21% |
| FY 2003 | 27.33% |
| FY 2004 | 26.17% |
| FY 2005 | 26.35% |
| FY 2006 | 26.39% |
| FY 2007 | 25.69% |
| FY 2008 | 26.91% |
| FY 2009 | 29.69% |
| FY 2010 | 25.12% |
| 11-Year Average | 26.51% |

As seen in the following table, the result of applying this methodology to general fund revenue estimates for FY 2011 increases OBPP's November estimate by \$37.93 million to \$1,732.04 million. This figure assumes a 6.43% increase in revenue between FY 2010 and FY 2011. For FY 2012 and FY 2013, original growth rates as estimated on November 15 were used. The net effect of applying this methodology to OBPP's general fund revenue estimates adds \$118.70 million to OBPP's three year general fund revenue estimate. This increase reflects a 2.24% increase over the November 15 estimate.

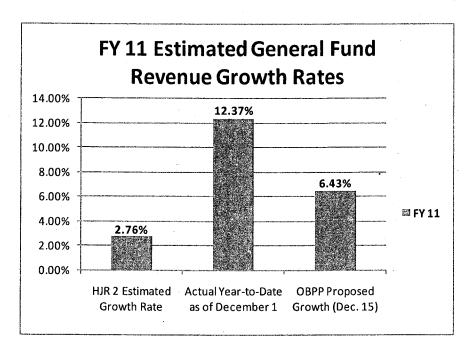
| OBPP General Fund Revenue Estimates Change - As of December 15, 2010 | | | | | | | |
|--|----------|----------|----------|------------------------|---------|---------|---------|
| General Fund Revenue | | | | Estimated Growth Rates | | | |
| | FY 2011 | FY 2012 | FY 2013 | Three Year Total | FY 2011 | FY 2012 | FY 2013 |
| OBPP Nov. 15 | 1,694.11 | 1,757.10 | 1,846.14 | 5,297.35 | 4.09% | 3.72% | 5.07% |
| OBPP Dec. 15 | 1,732.04 | 1,796.47 | 1,887.55 | 5,416.05 | 6.43% | 3.72% | 5.07% |
| Change | 37.93 | 39.37 | 41.41 | 118.70 | 2.34% | 0.00% | 0.00% |

Reasonability of New Methodology

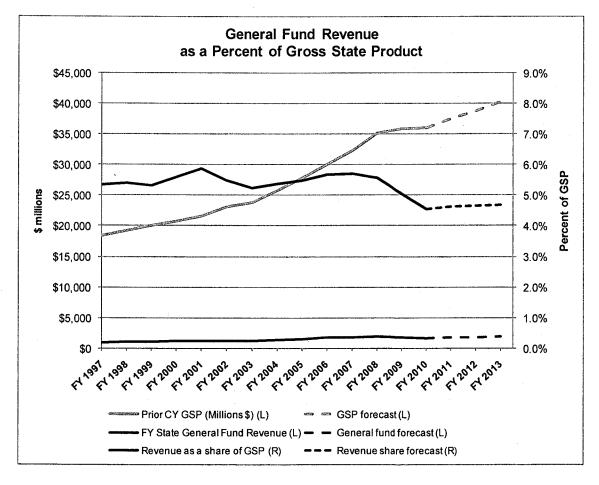
Many data points suggest that these proposed changes are reasonable. First, analysis was undertaken to determine a reasonable amount of growth in revenue in fiscal years which follow a recession. The following table shows that in FY 1995, for every dollar lost to revenue decline in FY 1994, approximately \$0.76 was recouped. Likewise, in FY 2003, for every dollar lost to revenue decline in FY 2002, approximately \$0.61 was recouped. Using OBPP's revised growth rate of 6.43% for FY 2011, it is estimated that only \$0.37 will be recouped in FY 2011 for every dollar lost in the back-to-back recession years of FY 2009 and FY 2010 – far less than the amount recovered in previous recessions.

| General Fund "Bounce Back" After Recession | | | | | | |
|--|-------------|---------------|---------------------|--|--|--|
| | GF Revenue | % Change from | GF Revenue | | | |
| Fiscal Year | In Millions | Previous Year | Loss/Reclaim Factor | | | |
| 1994 | 892 | -6.42% | | | | |
| 1995 | 935 | 4.88% | 0.76 | | | |
| 2002 | 1,214 | -4.35% | | | | |
| 2003 | 1,246 | 2.65% | 0.61 | | | |
| 2009 | 1,808 | -7.50% | - | | | |
| 2010 | 1,627 | -10.00% | | | | |
| 2011 | 1,732 | 6.43% | 0.37 | | | |

Additionally, the following chart compares OBPP's revised growth rate for FY 2011 with the official growth rate adopted by the Revenue and Transportation Interim Committee on November 19, 2010 and the actual year-to-date collections growth rate (12.37%). When compared, OBPP's growth rate errs on the conservative side as it is significantly less than the actual year-to-date rate and implicitly assumes that collections will not continue at the rate currently realized through the end of November, 2010.



Furthermore, it is important to consider state general fund revenues in the context of other global variables which inevitably have impact on general fund revenue. State general fund revenue tracks the broadest measure of state economic activity - gross state product (GSP) - well. The following chart presents the relationship between calendar year GSP and the subsequent fiscal year's general fund revenue collections.



These data show the FY 1997 – FY 2010 actual general fund collections and OBPP projection of general fund revenue for FY 2011 and the 2013 biennium relative to the Bureau of Economic Affairs estimates of GSP (CY 1996 - CY 2009) and the Global Insight projection of GSP for CY 2010 through CY 2012. The results show that estimated revenue share in the forecast period experiences minimal gain with respect to total state economic activity in CY 2010, CY 2011 and CY 2012. The share for this forecast period averages approximately 4.65% of GSP while the FY 1997 – FY 2010 average share is 5.40% of GSP. This implies a conservative range of proposed revenue estimates relative to recent and projected recovery in economic activity in the state of Montana.

This new methodology when employed to last year produces estimates that may be very telling going forward. July-Nov. 2009 actual collections were \$400.703 million; the ten year total collection rate was 26.65% resulting in a total FY 2010 predicted revenue estimate of \$1,533 million. Applying the methodology for July through December 2009 (FY 2010); actual collections data amounted to \$600.813 million; 10 year cumulative average collected 36.97%. The predicted 2010 total revenue was \$1.625 million. FY 2010 resulted in an actual total revenue collection of \$1,627 million.

There are at least three points that can be made:

- The model can cause significant revenue adjustments by just one month's data.
 This can be viewed as a new volatile component or an appropriate way to capture inflection points. The change in revenue estimates from the November to December projections rose by 6%.
- 2) The December prediction turned out to be amazingly accurate. This model may have caught the inflection point of the economy recovering out of recession.
- 3) December numbers, not yet known, may suggest that \$1,732 is still significantly under-estimated.

Finally, OBPP will be assessing its revenue outlook during the 2011 legislative session, especially in an economic environment that may well suggest even higher revenue estimates.